Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

LIBRARY
JUN 7 1924
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 7 1924

REPORT FOR WEEK ENDING JUNE 7, 1924.
(Unless otherwise indicated.)

HAVRE:

The past week has been marked by low temperatures and a decided excess of precipitation. A maximum of 77 degrees was recorded on the 1st and 4th with a minimum of 34 on the morning of the 7th. Precipitation was recorded each day, varying from a trace the 1st to 1.76 on the 6th. Rain which started at noon on the 6th has been continuous to this time, noon the 7th. This has been rather slow in falling with very little run-off. Early the morning of the 7th, some snow fell. Precipitation for the week is 2.26 inches.

Rye is headed and spring grains have made good growth. Weather conditions have favored tilling. Corn planted on the 17th is mostly emerged but has made little growth.

Forage plantings, including sorghum, Sudan grass, and millet, were made during the week. Roadways were lined out and cultivated.

Grasshoppers are reported as being numerous in many sections of this district but weather conditions to date have been very unfavorable for them. No great damage has resulted from this pest as yet.

This county, Hill, has purchased 5 cars of poison, including bran, sawdust, syrup, and arsenic, and is prepared to put on an organized campaign. County Agent Duncan has been putting the major part of his time recently on this work. Weather conditions, however, may now be such that hoppers will make very little headway.

JUDITH BASIN: Week ending May 31, 1924.

Cool cloudy weather has continued throughout the week with light showers frequently occurring. Conditions have been very favorable to the growth of winter wheat and other small grains. Alfalfa has made rather slow progress, and none of the corn has commenced to come up.

Field work has been devoted chiefly to the trimming of plants and cultivation of trees. A four acre field of oats was seeded and with the exception of a few late date of plantings, seeding of all small grains on the station has been completed. Sweet clover, soy beans and alfalfa were seeded on the forage crop project.

Maximum temperature 67, minimum 33; precipitation .39 inch.

JUDITH BASIN:

The past week has been moderately warm and temperature conditions were the most favorable to crop growth that have occurred this season. A heavy frost occurred on June 5 but none of the field crops and only a few of the more tender garden crops were injured.

Judith Basin, continued:

Precipitation was received five days out of the seven, but, with the exception of that recorded on June 7, the showers were very light and of no benefit to crops. Fall grains and hay crops had commenced to suffer from lack of moisture but were relieved by a heavy rain of .70 inch on June 7.

All spring crops have made a good growth and were not injured by the dry weather. Corn is up with a fair stand on all plats. Alfalfa commenced to burn and winter wheat on the continuous cropping series and winter rye made practically no growth due to the lack of moisture, but it is believed that the recent rain will permit these latter three crops to fully recover.

Field work has been devoted largely to the plowing of fallow plats on the rotations, and cultivating of trees, row crops and summer fallow. Sunflowers were seeded, and the third planting of the vegetable garden was made.

Maximum temperature 74, minimum 31; precipitation .87 inch.

HUNTLEY:

All plowing for fallow, with the exception of the late plowed plats, was completed on the 6th. This is a few days earlier than has generally been the case but the heavy growth of weeds and volunteer grain on these plats made the move advisable.

Row crops and alleys received the first cultivation during the week, and the cultivator is being followed by hand hoeing to get the straggling weeds missed by the machine.

While the weather remains unseasonably cool, crops are showing more advance than was noticeable during the previous week. The past month was one of the driest Mays on record at this station, the total precipitation being 1.55 inches. Because of the cool weather and small crop growth this deficiency has not yet been greatly felt by the crops. June has started well from the standpoint of rainfall as 1.06 inches have been received during this first week. Of this amount, however, .88 inch came in the form of a dashing shower accompanied by wind and lasted about three quarters of an hour.

Maximum temperature 77, minimum 40; precipitation 1.06 inches.

SHERIDAN:

The first three days of the week were fair. A heavy rain fell on the afternoon and evening of the 4th, and cool cloudy weather has prevailed since. Condition of grain crops remains good, although growth is slow. Corn emerged the first of the week, but has made but little growth.

The remainder of the sorgo and Sudan grass, and the soy beans, and cow peas were seeded the first of the week. But little field work has been possible since. Tomato plants were received from Mandan, today, and have been planted.

Maximum temperature 72, minimum 34; precipitation 1.02 inches.

DICKINSON:

Cold and windy weather has continued through the week until this morning, when a shower of .20 inch fell. This will benefit all crops but particularly late-seeded flax and corn which has needed moisture for complete germination. Crop growth has been slow, although grasses, alfalfa, and sweet clover look good.

Corn on the Rotations is emerging and the stand probably will be thick enough when it all comes through. This was planted May 12. It was harrowed the second time during the week.

Plums and apples have shown the maximum amount of bloom this week. Practically no loss of shrubs occurred over winter except of Sapa plums. Trees of this variety started growth very late last year and this spring some are dead and others are showing green on only a few branches.

Fallow on the Rotations was plowed June 1 and 2. A good job was done.

Maximum temperature 73, minimum 39; precipitation .38 inch.

MANDAN:

Agronomy.

The past week has been favorable for field work. There was one warm day during the week, and the others were unseasonably cool. No rain of any value came during the week. It is very dry and the effects are beginning to show on some of the crops, especially alfalfa, brome grass and the wheat grasses. Some of the drilled plats of brome grass are drying up.

Fallow plats in the rotations were plowed and harrowed during the week. They were plowed on about the average date for this station.

Some crested wheat-grass selections were seeded for the Office of Forage Crop Investigations.

Corn is now up to a good stand on all plats. It was two weeks after planting before it came through.

Winter rye is starting to head out. Winter wheat looks the best it ever has on this station.

The plats are being staked today in readiness for trimming early next week.

The total precipitation for the year to June 1 is 2.65 inches, which is about 3.5 inches below normal. There was only .41 inch during the month of May. It is cloudy and cool today.

Maximum temperature 76, minimum 39; precipitation .12 inch.

Mandan, continued:

Cooperative Grazing Experiment.

The cattle were given their usual weighing on May 31. The gains for the short period were about normal. There was no outstanding difference between pastures.

Blue grama grass is just starting growth. It was not ready to clip in the quadrats at the end of May. The growth of native vegetation to date is the poorest it has been at this time of year since the experiment started.

The sedges which normally mature their seed about May 20 are just maturing a very few seeds. Even Artemisia frigida has not made a normal growth for the season.

Arboriculture.

The lining out of the conifer seedlings has been completed and the entire plantings are now being irrigated. Mr. A. W. Emerson and Mr. R. W. Hansen reported this morning for the shelterbelt inspection work.

Horticulture.

Outdoor crossing work for the season has been completed. Fruit from the crossing work is setting fairly well. Cherries from the crossing work in the greenhouse have been picked, and the seeds stratified.

All fields have been cultivated for the first time this season, and hoeing has been started. Owing to the cool, dry weather, weeds have grown slowly this spring.

Planting out of bedding plants on the grounds has been finished.

Celery plants and late cabbage have been planted. About 4,000 have been set out in the breeding plat.

Visitors of the week included Mr. P. H. Dorsett, Agricultural Explorer, Foreign Seed and Plant Introduction, and his son, on June 5, and Dr. R. L. Webster, State Entomologist at the North Dakota Agricultural College, on June 7.

ARDMORE:

The weather continues cold and dry with only a small amount of precipitation. Corn is coming through the ground but the weather has been so cold and dry that a poor stand was secured.

All crops are making a very slow growth. Cultivated and native pastures are far behind a normal development. Alfalfa has made less than half the usual growth for this time of the year. Alfalfa hog pastures, which were expected to supply feed until about July 10, are about cleaned up at this time.

Ardmore, continued:

Rotation plats of flax were seeded during the week, which completes seeding on the station with the exception of a small acreage of Sudan grass.
Maximum temperature 84, minimum 38; precipitation .42 inch.

ARCHER:

Weather conditions during the past week have been favorable for field work. All seeding in the experimental field was completed and there remains about two days of millet seeding in the general field. The corn which was seeded May 6 is just emerging. The small cereals are doing well and the new seedings of grass, alfalfa and clover for the most part have emerged and good stands secured.

Unusually heavy cool winds have occurred, which makes the temperature from day to day freakish.

Alfalfa, clovers, grasses and native pastures are making exceptionally rapid growth.
Maximum temperature 79, minimum 36; precipitation .10 inch.

NORTH PLATTE: Week ending May 31, 1924.

Low temperatures have continued during the week. No freezing has occurred but the range of both maximum and minimum temperatures has been much below normal. The mean temperature for the 30 days of the month to date is 52 degrees. This is 6.7 degrees below the Weather Bureau 49-year average and equals the lowest mean for May in any year.

A decided change has occurred in moisture conditions. The sky has been overcast almost continuously for the past 11 days. Precipitation has been recorded on eight of these, totaling 2.60 inches. It is raining as this is written on the last day of the month and it is possible that the May normal of 3.06 inches will be reached.

The cold wet weather is causing corn a hard struggle. On the station 50 to 70 per cent has emerged. On farms in this section very little has emerged. Very little seed is available for replanting.

Small grains are developing rapidly. Rye is fully headed and the first heads have appeared on early winter wheat.

NORTH PLATTE:

Corn on the D. L. A. plats is up but is not making much growth due to cold weather.

The winter wheat on all except the summer till plats is headed out. It is rather short and shows the effect of the dry weather earlier in the season.

North Platte, continued:

The cane in the D. L. A. rotations was planted Tuesday, also the sorghum varieties.

Weather conditions have been rather unsettled, with several light showers early in the week and a rain of 1.24 inches Friday night.

Friday P.M. the Station was visited by a number of stockmen who were attending the Stockgrowers Convention in North Platte.

HAYS:

During the past week the weather has been mild, generally quiet and part cloudy. Few storms have approached within sight but none of importance have occurred in this vicinity. Light sprinkles have occurred on three different days but the total precipitation amounted to only .11 inch.

Owing to the fact that the ground dried out slowly after the heavy rains of two weeks ago, much of the corn and kafir was able to emerge so that not as much replanting has been necessary as was expected. On the Dry Land Project it was necessary to replant kafir on Rotations 551 to 560, inclusive, and Rotations 401 and 402. A few commercial fields are being replanted.

Winter wheat is doing nicely. It is all, or practically all, fully headed. Much of it is three to three and one-half feet high and it never looked much if any better on the project.

Barley and oats, also spring wheat, are not doing so well. These crops are fair, but nothing above average.

The newly seeded plats of alfalfa and brome show a good stand after a second seeding, but the grass is very thick and nearly as big as the alfalfa and brome, so there is some question as to whether or not the alfalfa and brome will survive. The sod plats of these crops have only a thin stand. The outlay for alfalfa and brome on the project is the poorest at this time it has been for several seasons.

Alfalfa on the bottom land is about 22 to 24 inches high and fairly thick growth, but not up to standard for the first crop. This is likely due to so much cool weather, late frosts and a dry May, even though the fall and winter moisture was good. The alfalfa plats were mown today, the 7th.

Most of the time during the week has been spent mowing roads, cultivating roads and alleys, cultivating rowed crops with a weeder, replanting the plats that needed replanting, taking soil samples, and mowing alfalfa.
Maximum temperature 76, minimum 46.

GARDEN CITY:

Growing conditions have been quite favorable during the past week. Winter rye is fully headed and is ready to be plowed under as green manure. Some wheat plats are also beginning to head.

Planting was completed on Wednesday afternoon. Some of the earlier planted milo and cowpeas are emerging to a good stand. The sorghums planted on May 15th have emerged to only a fair stand. The seedbed was rather dry at the time of planting and a great many of the seeds were unable to germinate strong enough to emerge. Weeds are making a rapid growth which will necessitate an extra amount of cultivation.

Maximum temperature 85, minimum 42; precipitation 0.

DALHART:

Climatic conditions have been more favorable during the past week than the preceding week. Temperatures have been higher both in maximum and minimum. Some precipitation was recorded, also a little hail. The hail did some damage to winter rye, which amounted to approximately 4%.

Field operations have been in progress all week with the exception of one day which was lost on account of rain. All the Dry Land project is prepared for planting. Kafir was planted during the week on all D. L. A. rotations and C.C. plats. Peanuts were planted on Rotation 295 B. The date and variety cotton was planted on June 3, as was also the third dates of grain and forage sorghums. By the end of today the plats will have been prepared for the planting of all varieties on the Cereal and Forage block, including sorghums on fallow. With weather conditions favorable, planting will be resumed the first of the week and continued until everything is planted except the remaining dates. These will be planted as close to the proper dates as weather conditions will permit. The June 1 date was delayed until the 3rd on account of rain. The first two dates were cultivated during the week.

Thinning operations will be commenced the first of the week. Prospects at present are flattering. Winter rye is looking good for around 25 to 30 bushels on some plats, discounting the possibility of destruction from hail or other causes. Oats and barley are looking fine and are headed out in good shape. These have a prospect for an extra good yield. The weed situation on this station is under control in the best shape it has been in the past six years. The field cultivator which was purchased last fall is not only a time saver but is a weed killer. All plats are in the best of condition for planting this year. The work done on the plats early in the spring caused most of the weed seed to germinate early so it was easier to get them killed out before planting. The increase fields are also in fine shape for planting.

Sweet clover on the roadways is from 20 to 40 inches in height and in full bloom. This will be left standing until a crop of seed is matured. It will then be cut and the seed used for planting elsewhere.

Maximum temperature 86, minimum 44; precipitation .27 inch.

The precipitation during May was 2.24 inches. This is .55 inch below average.

TUCUMCARI:

As a result of precipitation totaling 1.53 inches last week, the soil was in excellent condition for planting early this week and one team has been planting steadily throughout the week. Two other teams have been listing, harrowing, disking, and go-deviling, preparing the land for planting, with the exception of the time one of these teams was drilling about 15 acres. The center field has been planted; the forty-acre south field is planted to cowpeas and Sudan and variety sorghums, with only the two last date plantings to be made; the north field plats will be completed tonight; and the increase field is planted, with the exception of about four acres of cowpeas and milo.

A week ago conditions seemed discouraging, as crops were in danger of being late, but after such a favorable week crop conditions now seem unusually promising--an abundance of moisture is present, the temperature is now warm enough to hasten germination, and good stands are expected on most plats very soon, for cowpeas and Sudan planted on Monday were beginning to emerge Friday afternoon.

Partial stands were secured on the May 1 and May 15 date plats ten days after planting, but many seeds did not sprout until a week ago, following the rains. It is still uncertain whether satisfactory stands will be secured on all plats, but seedlings are emerging every day and doubtless most plats of early dates will show fair stands by Monday.

The May 1 dates of Feterita and Dwarf Feterita will probably be a failure, for the soil was inclined to blow and was so dry to a depth of at least five inches that there was no means to prevent injury-- those plants which had emerged were badly cut and buried by sand, while the seeds which did not germinate are doubtless buried so deeply they cannot emerge.

Cotton was planted on Tuesday and should show a satisfactory stand by Monday. Ranges are in excellent condition, cattle in unusually good shape, and much of the small grain acreage on the plains south of here will make a very satisfactory yield, while in other localities where less rain was received small grains are in critical condition.

Maximum temperature 90, minimum 48; precipitation .05 inch.
Evaporation 1.964 inches. Average wind velocity 5.0 miles per hour.

LAWTON:

The May rainfall amounted to 3.05 inches, resulting in a deficiency of 2.11 inches for the month. From the first of June to the 7th rain fell on four dates amounting to 1.67 inches. In spite of the rainfall considerable field work was done during the week. Weeds are growing very rapidly. A rather high wind velocity followed the last rain, which fell on the 5th, and cultivation was necessary at the very earliest date.

Thinning of all sorghum crops will be completed within a day or two. Cotton is yet small but chopping will likely start at once. Winter barley and Arbruzzi rye were harvested June 3. Common rye will be ready for harvest about June 9.

Lawton, continued:

Wheat and oats are turning very rapidly. It is likely that some harvesting will be done the latter part of the week. Wheat harvest throughout the county will begin sometime during the week.

Young grasshoppers are very numerous and in several instances considerable damage is being reported. The damage is, so far, confined to cotton. Although the hoppers are numerous in many places on the station, their presence is largely confined to grassy places. Whether or not they will be thick enough to inflict damage is very uncertain just now.

Temperatures during the past week have been favorable to the growth of cotton and other row crops.

Mr. F. Frolik, a Federal Department representative who is studying wheat rusts, visited the station briefly June 3. Mr. Pinckney, of the Wichita, Kansas, Entomology Laboratory, spent most of the week here doing preliminary work with Calcium Cyanide, which is to be later used in chinch bug control. The chinch bug infestation to date is very light as compared with the usual conditions that prevail here.

WOODWARD:

We had enough precipitation, so that planting, which had been delayed on account of lack of moisture, has been going forward. If the weather permits the rotations will be planted the first of next week.

Grape and other cuttings were set out Monday and Tuesday. Some alfalfa has been cut and hauled in. Brush was hauled out of the orchard. Some grading was done around the buildings on the dairy farm. The first fruit, a few trees of cherries, were picked on the 6th. Corn on the rotations was thinned. The vineyard was dusted with nicotine lime dust in an attempt to control the grape leaf hopper.

Mr. Pierce, of the Office of Fruit Disease Investigations, from Bentonville, Arkansas, visited the station on the 3rd.

Maximum temperature 95, minimum 50; precipitation 1.22 inches. Evaporation 1.203 inches. Average wind velocity 6.3 miles per hour.

LIBRARY
JUN 2 1924
BUREAU OF
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 14 1924

REPORT FOR WEEK ENDING JUNE 14, 1924.

HAVRE:

Growing conditions for grains have been excellent during the last week. The rain of a week ago proved to be one of the best that this country has had during the last few years. 2.75 inches fell in about 35 hours and at no time was it heavy enough to cause run-off to any extent. Following this there have been several showers with cool and partially cloudy weather. All grains are growing rapidly with more vegetative growth on fallow than on other plats. Corn is growing very slowly. While most of the corn planted on May 17 is up, some of it is not and a few of the kernels are just well sprouted. Planting made two weeks later and more shallow are just as far advanced at this time as the earlier dates. Domestic grasses and alfalfa are short at this time due to the lack of precipitation since last August.

Mr. Stewart Lockwood, of the Biological Survey, was a station visitor during the week. This Bureau is making a detailed study of poison baits for grasshoppers and this work is being conducted on the station. During the last week more grasshoppers have hatched but the growth has been retarded due to the cool weather.

Mr. M. L. Wilson was here on the 13th.
Maximum temperature 78, minimum 33; precipitation 1.29 inches.
Precipitation for June to date 3.76 inches. Rain has been recorded each day this month varying from a trace to 1.76 inches.

JUDITH BASIN:

The past week has been comparatively cool with light showers occurring on five days out of the seven. Conditions as a whole have been very favorable to crop growth. Winter rye is heading and fall wheat has attained a height of over twelve inches. Alfalfa and sweet clover have made a very rapid growth, and this year's seeding of alfalfa, sweet clover and corn are up.

Due to frequent showers very little work in the field has been possible. The final plantings of sunflowers, corn and potatoes were made. Plowing of summer fallow on the cereal project is in progress and grading of roads has been commenced.

Mr. LeRoy Powers, a graduate of the Montana State College, arrived at this station on June 12 to assist with the experimental work for several months.

Maximum temperature 71, minimum 33; precipitation .53 inch.

HUNTLEY:

Light showers occurring almost daily this week have supplemented the rather heavy rainfall of a week ago. This moisture has served to thicken up the stands of corn and beans which have been slow to emerge.

Huntley, continued:

The first part of the week continued cold, a minumum temperature of 35 having been recorded at the station, while reports of frost have been received from neighboring localities. Yesterday and today have been warm and humid and corn has made a noticeable response to the more favorable growing conditions. In spite of the cool weather small grains have made good progress during the week. Winter rye is now fully headed and winter wheat is in the boot, while spring grains are well stooled and in some cases beginning to make straw.

On two days during the week the station was visited by large delegations of farmers under the leadership of the county agent and various farm organizations.

Maximum temperature 82, minimum 35; precipitation .40 inch.

SHERIDAN:

The greater part of the week has been fair and the last few days quite warm. All crops already up have been making rapid growth. Seed in the ground continues slow to emerge, however. Soybeans, cow peas, beans, sorgo in the varieties and rotations, and Sudan grass emerged during the week. Potatoes planted May 20 are just beginning to emerge.

Plowing of the Rotation plats for fallow was begun yesterday, June 13. All of the roadways have been marked and worked out.

Maximum temperature 80, minimum 33; precipitation .01 inch.

MANDAN:

Agronomy.

The dry period of the past spring was broken by good rains during the week. It started raining on the 7th and several good showers have fallen during the week. The soil is now in excellent condition for growing crops, which show much improvement.

Crested wheat-grass is starting to head out, and alfalfa is making rapid growth. Millet varieties are just coming up.

Plats were trimmed and roadways cultivated.

The total rainfall for the week was 2.16 inches, 1.55 inches of this amount was recorded on the morning of the 8th.

Maximum temperature 80, minimum 40; precipitation 2.16 inches.

Cooperative Grazing Experiment.

Native vegetation has been much improved by the rains of the past week. The cattle appear to be gaining rapidly, and flies have not bothered them to any extent to date.

The units in the isolation transects are fenced for the season. The dam in the reserve pasture is now well filled with water.

Mandan, continued:

Horticulture.

A new strawberry bed was planted inthe first part of the week, and good stands aprear to have been obtained. Only the better varieties from the old bed were continued in the new bed. It is planned to keep a straw mulch on half of the plants of each variety throughout the summer, and cultivate the other half.

The second spraying of bearing fruit trees, generally applied just after the petals fall, was started on June 13. Arsenate of lead, lime sulphur and nicotine sulphate, are combined in the spray.

Greenwood cuttings of gooseberries, juneberries, sand cherries, and a number of different ornamental shrubs, were made during the week. A total of over 2,000 cuttings have been made.

Planting on the grounds and gardens has been completed. Stands in the acre-garden are irregular for some varieties.

Other work included mowing the lawns, lettering and placing stakes in the field, taking June notes, hoeing weeds, and cultivating.

Arboriculture.

Twenty-four pounds of American elm seed, collected on June 5, and eighty-eight pounds of Chinese elm seed, collected on June 11 and 12, have just been planted in the nursery.

The soil is in excellent condition after the recent rains, so that prospects of germination are favorable.

Work in preparing maps and inspection sheets has been under way during the week.

BELLE FOURCHE:

The weather warmed up considerably this week. For the past four nights the minimum temperature has been above 50 degrees. Previous to that time the minimum temrerature had seldom been much above 40.

Spring grains have stooled well and are now forming straw. It is noticeable that all plats of grain on corn and sorghum ground are decidedly off color, though their growth is as good as on most other methods of cultivation. Soil samples taken on the wheat plats show that the moisture supply in the first foot is getting low, but that the second and third feet of soil are still nearly saturated.

Bellefourche,continued:

Winter grains commenced to fire in spots about June 13 but cloudy weather today has enabled them to recover. A few heads are appearing on the winter wheat. The winter rye for green manure was plowed under during the week.

Rain fell on three days during the week. The total rainfall was only .27 inch.
Maximum temperature 83, minimum 39.

BELLE FOURCHE: Week ending June 7, 1924.

The week started out warm but soon reverted to cool and has been co ever since. Rain has fallen on five days of the week, but no single rain wet the soil to the depth of over half an inch.

Small grains are developing slowly but have a good color and are in healthy condition. Winter wheat is shooting rapidly and will soon head. The winter grains are apparently low on moisture but the cool cloudy weather has prevented their suffering. Soil samples taken on spring wheat show that all three feet of soil are still nearly filled with moisture.

Corn came up on June 1. The fall plowed plats have a good stand. The stand on the spring plowed plats varies from none to about 50%.

The roads were scraped and dragged during the week.
Maximum temperature 85, minimum 38; precipitation .38 inch.

ARDMORE:

The weather continues dry and hot with no prospects of relief from the long continued drought. During the entire growing season there has not been a rainfall sufficient in amount to be of any benefit to crops.

Hot winds have prevailed during the last two days of the week, with the result that spring wheat and oats, which are about six inches in height, have begun to turn brown. Alfalfa is beyond hopes of producing a crop regardless of the amount of rain that may fall at an early date. This crop probably will be clipped next week and left on the ground in the hopes that a second crop may be secured. Corn and cane are up with good stands despite the unfavorable weather conditions.

Native vegetation is making no growth, and pastures are brown. Present prospects are that there will not be enough feed to carry the beef cattle after August 1.

Mr. V. I. Clark, formerly employed at this station for a number of years, is again at work. He is giving his time to vegetation studies, soil moisture and similar work.
Maximum temperature 100, minimum 39; precipitation .15 inch.

ARCHER:

The work for the most part has consisted of millet seeding, lining and cleaning roadway and yard for the summer.

The earliest of the winter wheat is coming into boot. Alfalfa and hay corps have grown very rapidly. The stand of corn in most cases will be a little thin due to the cool weather the last half of May. The sunflowers were not injured but seemed to thrive during the cool spell.

Sunflower silage is still being fed to the dairy cows. They consume a very large feed during the night.

There has been a change from cool to warm weather.
Maximum temperature 87, minimum 34; precipitation .59 inch.

NORTH PLATTE:

The fore part of the week was characterized by cold rainy weather which held up field work until Wednesday.

The plowing on the D. L. A. summer till plats was completed Thursday The first cultivation of the corn on the D. L. A. plats was commenced Friday.
Maximum temperature 86, minimum 39; precipitation 2.27 inches.

GARDEN CITY:

Weather during the past week has been hot and dry. Rains have threatened on several days, but no measurable amount of precipitation was received. Hot winds were noticed on two days.

Winter wheat is fully headed and on some plats is beginning to show the need of moisture. Wheat growing on fallow ground began to burn yesterday.

Surface planted sorghums have emerged to a good stand on most plats and have made a rapid growth. A very poor stand of cowpeas was secured on all plats and it will probably be necessary to replant this crop. The poor stand is, no doubt, partly due to poor seed and partly to the fact that the rain which came the day following planting caused a crust to form thus preventing the emergence of the weaker plants.

Field work this week has consisted of turning under the rye for green manure, plowing fallows in rotations, staking roadways in preparation for trimming and hoeing alleys and roadways.

Director F. D. Farrell, Professors L. F. Melchers and E. A. Stokdyk, of the Kansas Experiment Station, were visitors this week.
Maximum temperature 100, minimum 52; precipitation, Trace.

DALHART:

Winter is over for this section and summer is here full blast. It took just fifteen minutes to make the change. Temperatures have been high during the week with traces of hot winds during three days. Rain is being needed pretty badly over this section. The range grass which was a deep green the first of the week is now turned brown. This week has taken the snap out of things.

The favorable weather that prevailed during the past week has been decidedly in favor of field operations here. There were no delays during the entire week and rapid progress was made with the work. The planting is completed for this year with the exception of the two last date plantings and these will be made on the regular date or as nearly so as conditions will permit. All the rotations and other experimental plantings were finished first, then the increase fields were planted. The seed bed in every instance is in excellent condition and the germination of the seed ought to be fairly rapid considering the extreme heat prevailing. All the summer fallow plats were plowed this week excepting the late plowing, which will be done about July 1. In spite of the dry weather which has continued here the plats were in excellent condition for plowing. To a depth of eight inches no dry dirt was struck, except, of course, the surface soil.

The cotton is coming up in good shape except the May 15 date of planting. This is rather scattering. The grasshopper infestation is bad this year and they seem to be centering their activities on the cotton. Two applications of poison bran mash have been applied this week in an effort to save the cotton. Another application will be made in a few days. The poison was scattered about sunrise so as to get the maximum effect.

All the crops that are up sufficiently have been thinned. This includes the first two dates of planting and the field corn. As soon as the remaining crops get sufficient start the thinning operations will be resumed and rushed to completion. Soil samples were taken this week.
Maximum temperature 102, minimum 47, precipitation 0.

TUCUMCARI:

The past week has been characterized by clear weather, low wind velocity, and high temperatures. Following the unusually cool May and early June, the past two days of low wind velocity and temperatures of over 100 have seemed almost unbearable. Ninety degrees, recorded on two days, was the highest temperature recorded previous to this week.

Early in the week the planting was completed, while plowing of M. C. fallow plats was done. A go-devil has been kept in the listed increase fields most of the week, while cultivating of plats is progressing.

Tucumcari, continued:

In spite of low wind velocity, drying of surface soil has been very rapid. On Monday cowpeas and milo, increase, were planted 3 to 4 inches deep in soil which was well moistened. Examination of this field, Friday, indicated that drying had occurred so deep that very little germination would occur until rain was received. A portion of the north field plats will not show satisfactory stands until after a rain, while other plats showed satisfactory stands five to seven days after planting. Cotton is emerging slowly and unevenly, but should make good stands, with the possible exception of the May 15 dates.

Grape vines planted a year ago this spring, which were cut back to two buds this spring, are growing exceptionally well. Possibly one-half the plants have now reached the wire, four feet from the ground.

Of the seventy evergreens ten each of seven varieties, planted this spring, not over ten trees are alive. Fifteen varieties of deciduous trees, ten of each variety, have done exceptionally well, only four trees dying. The only deciduous tree proving disappointing was the soapberry, of which only one survived.

Maximum temperature 102, minimum 54; precipitation 0.
Evaporation 2.859 inches. Average wind velocity 4.8 miles per hour.

BIG SPRING:

The weather during the past two weeks has been exceptionally hot for this time of the year. The thermometer has reached 105 on two different occasions during the past week, and during the rest of the time it has been 100 or more. All crops are making a good growth at present, but if this hot weather continues the soil will soon be getting dry. The weeds are doing as well as the crops, so it has been necessary to keep the cultivators busy most of the time.

The winter wheat plats were harvested this week, but were very poor. The straw was so short that it was necessary to cut them with a mower. With the exception of one plat, there is very little grain in any of them. Trimming the plats and thinning milo occupied most of the time during the past week.

Maximum temperature 105, minimum 55; precipitation 0.

LAWTON:

No longer is there any complaint of cool weather. High temperatures prevailed throughout the week, culminating in a maximum of 104 on the 14th.

Small grain crops matured with unusual rapidity during the week and harvest has been rusing along at top speed the entire week. On the station, only a few plats of wheat seeded in November remain to be harvested. Oats and barley produced a light to medium growth of straw, but wheat in most instances was rank in growth. The shocks average about five in number to each one-tenth acre plat.

Lawton, continued:

Thinning of all sorghums except late planted plats is completed and all of the cotton on rotation plats has been chopped. The ends of all row crop plats have been trimmed and the roads are being cleaned up.

Grasshoppers continue in numerous quantities and a good many farmers report considerable damage to cotton.

The surface soil is hard and dry, and all growing crops would be materially benefitted by rain.

Maximum temperature 104, minimum 65; precipitation .02 inch.

LIBRARY
JUN 11 1924
BUREAU OF
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 21 1924

REPORT FOR WEEK ENDING JUNE 21, 1924.
(Unless otherwise indicated.)

DICKINSON:

This locality was hit by a very severe windstorm on the evening of June 18. Two people were killed in Dickinson and a family of four on a farm 20 miles north. The wind was estimated at 90 miles an hour and was accompanied by rain of 1.25 inch, most of this falling in a period of about 20 minutes. Buildings of all types were damaged or destroyed and many trees destroyed, particularly large shade trees in town. In some nearby localities severe hail loss resulted.

On the station all buildings were damaged some, the Wind Electric plant was blowed over and smashed and the old pump house blown away. Trees were badly broken, cottonwood and boxelder showing greatest injury. Only one evergreen was broken. A few of the larger crab trees were broken but trees set out this spring and a year ago came through with some loss of foliage.

Corn, the garden, and row crops were greatly injured by wind and washing, but small grains appear to be recovering without much damage. On all slopes the ground was badly gullied.

Since the storm the station has been without water, lights and telephone. A pump is being rigged up with an engine.

The septic tank is being worked over and placed deeper and the sewer line placed about a foot and a half deeper to take care of the drainage of the basement of the buildings.

Mr. J. M. Stephens visited the station June 21.

Maximum temperature 78, minimum 42, precipitation 1.55 inch.

JUDITH BASIN:

An abundance of precipitation has been received during the past week, and practically no field work has been possible. Cool cloudy weather has prevailed during a greater portion of the time and crop growth has been rather backward.

Work during the week has been devoted to the cleaning of winter wheat seed, pruning trees in the shelter belt experiments, and hauling gravel for filling in around hog house.

Maximum temperature 75, minimum 39, precipitation 1.19 inch.

HAVRE:

The past week has been very typical of a wet June in this State. Rain was recorded on six days, with a total of .87 inch on six days. This came in the form of slow showers with intermittent clear and cloudy skies. Temperatures have been slightly below normal with no warm weather during the day.

All early seeded grains are shooting with barley showing boot. Flax is making fair growth but the stands will lack in uniformity. Winter rye is about waist high and blooming. Under present weather conditions many later stools will develop heads. Corn has made very slow growth and is lacking in growth.

Professor Clyde McKee, of the Montana Experiment Station, was a visitor on June 21 and 22.

Maximum temperature 78, minimum 54.

HUNTLEY:

Ideal growing weather has prevailed during the greater part of the week, and crops have made a marked increase in height and development. Winter rye is now fully headed and a few heads are appearing in the plats of winter wheat. Corn and flax have increased in stand to some extent and though the plats look more or less ragged at present the newly emerged plants are rapidly gaining on the first plants come up which were somewhat stunted by cold weather during the past month.

Well distributed showers have kept winter grains and alfalfa from wilting where the soil moisture content was getting low and the soil was beginning to crack. Alfalfa has made an unusually good growth this spring and should yield a good first cutting of hay.

Maximum temperature 84, minimum 43, precipitation .69 inch.

SHERIDAN:

Quite warm weather prevailed over the first part of the week. Showers occurred on the eighteenth and nineteenth, accompanied by much cooler weather. Growth of all vegetation has been rapid. Winter wheat in the rotations, the earlier dates of seeding, and the Blackhull variety of the variety test are heading. One variety of alfalfa, Ladak, is just beginning to blossom, and Mariout and Flynn barley in the variety test are heading. The winter wheat and early barley varieties are heading about five days later than last year. Other spring grains, However, are considerably further behind in growth.

Summer fallow for experimental work, except plat O of the Methods of Fallow, has been completed during the week. Even where there was a heavy growth of volunteer grain the soil still remained as moist as would plow well. Winter rye in the rotations was turned under for green manure on the sixteenth.

Maximum temperature 82, minimum 38, precipitation .64 inch.

MANDAN:

Agronomy.

Field work during the past week has been interrupted by frequent and heavy rains. On the seventeenth there was a heavy rain amounting to a cloudburst between here and Flasher. The rain was accompanied by a hard hail which did considerable damage to crops in the St. Anthony district. In some areas the crops were beaten into the ground, and some stock was reported killed. A high wind also blew down buildings and took roofs off others. The rainfall here on the same day amounted to .31 inch, with traces of hail, and .56 inch at the pasture. On the afternoon of the eighteenth a cloudburst struck here about 4:00 p.m. with considerable hail which did little damage. From 4:00 p.m. to 5:15, one and thirty-four hundredths inches of rain fell. Over an inch of this amount came in the first twenty-five minutes. At 6:00 p.m. another rain of .69 inch came. There was some damage done by washing in the fields, but nothing very serious. There was only .70 inch of rain at the pasture.

There was no damage from wind at this place, but farther west there was a lot of damage to buildings. Most of the rain came too hard to be of much benefit to crops. The soil is wet down to only 18 to 20 inches.

Most of the corn was given the first cultivation during the week. Corn was also thinned. Winter rye, for green manure, was turned under on the twenty-first.

All the crops are making excellent growth. It remains too cool for corn which is backward.

Alfalfa, brome grass, and crested wheat grass should be ready to cut during the coming week.

Mandan, contd.

Maximum temperature 81, minimum 45, precipitation 2.45 inches, for June to date 4.73 inches.

Cooperative Grazing Experiment.

Native vegetation has improved during the past week and is now in excellent condition for grazing in all pastures. Artemisia frigida does not show up in the 30-acre pasture at this time as much as usual

The dam, which was built in the reserve pasture last year, stood up under the heavy rains without damage. It is now completely filled and a good deal of water went through the spillway during the recent rains.

Brome grass in the cultivated pasture is now completely headed out. It is much shorter than last year at this time.

Horticulture.

June notes on winter injury have been taken and in general winter injury was more severe than has been the case for several years past. Very young trees and some of the oldest trees were the most severely injured. It appears that the condition of the tree has a great deal do with winter injury, as trees that were growing vigorously and in good condition generally escaped with little or no winter injury. Some of the young hybrid plums from Minnesota suffered severely as did plums of the Wild Goose type.

The second annual spraying has been completed. Plum gougers and tent caterpillars have been the most noticeable insects on the fruit trees up to the present date. The spray controls the latter pest, but the gougers are difficult to poison.

Trees budded in the nursery last summer are showing a better stand than usual. About 4,000 buds are now growing. These have been staked and tied to prevent damage by winds.

Hedges are being trimmed, the lilacs as usual showing up very well.

The lawns were mowed during the week. The shrubs now in bloom on the grounds include snow balls, lilacs, and Vanhoutte spirea. The latter is not blooming heavily this year, the flowers having been heavily damaged oy frost,

Arboriculture.

Hoeing has continued during the week. Practically no damage to the nursery stock has been done by the unusually heavy storms of the past week. Blister beetles are beginning to show on the Caragana. The first spraying with arsenate of lead has been completed.

The Flasher, New Salem, and Mandan Holstein Fresian Dairy Circuits held their annual picnics on the 17th, 18th, and 19th respectively. There was a considerable attendance of farmers at each. The Mandan picnic included a visit to the Station and the Cooperative Grazing pastures, and great interest was taken by the visitors in the various phases of the work.

BELLE FOURCHE:

The week was generally warmer than any previous week this season, though there were a few unseasonably cold days. The warmer weather caused considerable injury to crops that were beginning to run short on water. The hay crops ceased growth and commenced firing early in the week. They were mowed on June 18. Appearances indicate that the bromewill give the highest yield, the alfalfa next, and the sweet clover the least.

Belle Fourche, contd.

Winter grains are firing badly. The winter rye has lost at least one-half of its leaves and the winter wheat is in nearly as bad condition. Rain in the near future would revive either of these crops, but it will have to come soon, or the yield will be seriously compromised.

Spring grains have not fired as yet but will apparently be very short. Oats and barley are in the boot but will have difficulty in heading without rain. Soil samples taken in the wheat show that the available water in the first foot is practically all gone, that in the second foot at least half gone, while that in the third foot is just beginning to be used.

Rain fell on five days during the week but the total amount of rain was only .08 inch. The total rainfall for the month to date is .73 inch. The average June rainfall is 2.65 inches. The maximum temperature was 87, and the minimum 41.

ARCHER:

The greater part of the week has been warm and dry. The maximum for the week, 87 degrees, occurred June 18, and the same night the minimum, 35 degrees, occurred. On June 19 .17 inch of rain fell.

The work for the week has consisted of cleaning yards, grading road-way in farmstead, cleaning trees, lining up plats, and cultivating road-ways and alleys.

The winter wheat is in boot. That seeded on fallow and green manure is looking good while that seeded on small cereal stubble is shorter and not as dark in color. That seeded in corn rows is rather thin but has made good growth.

NORTH PLATTE:

The corn in the D.L.A. plats and the variety field was thinned this week. The first cultivation of all corn was completed also. Due to the warm weather of past week all crops are making rapid growth.

Oats and barley on the D.L.A. project are completely headed out. The spring wheat is just commencing to head out.

The third round of soil samples has just been completed. There is plenty of moisture in all spring grain and corn plats, but some of the winter wheat plats are getting quite dry.

Total precipitation for the week .07 inch, maximum temperature 87, minimum 54.

HAYS:

The weather during the week was very changeable. The temperature ranged from 47 to 104 degrees. While it was cool and cloudy part of the week, it was also very warm or hot part of the time. The first hot winds of the season occurred during the week. The other extreme consisted of a heavy fog two mornings, but there was no rainfall during the week of a measurable quantity.

The dry hot weather is hastening wheat harvest. In fact it is ripening too fast for best yield and quality. The ground is very dry and large cracks have opened in the soil. The wheat is coloring rapidly, some of it has the appearance of having slightly burned. It is reported harvest has already been started 75 miles east of Hays.

All of the fallowed plats have produced a heavy growth of straw, some of which is now lodging. Lodging is especially bad on Rotation 570.

The row crops which have been very backward are now commencing to make a good growth. During the week all row crops were cultivated for the second time. These crops were also thinned during the week.

Hays, contd.

Canada field peas, which had developed a thick growth about 30 inches high, were commencing to bloom and were lodging badly when plowed under June 16. The ground turned very dry and cloddy.

M.F. fallow Plat F was also plowed June 16. On this plat previous to plowing there had developed a thin growth of volunteer wheat about 36 inches high and also a growth of weeds 18 inches high. This growth had used up the moisture so that the ground turned very dry and cloddy like that where the peas were plowed under.

During the week all the fallow plats which were plowed during the month of May were cultivated to destroy a crop of weeds and grass which had started since plowing.

Soil moisture determinations were made, one plat on rotation 55 and one in rotation 56 where the green manure crops had been plowed under.

GARDEN CITY:

A much needed rain, amounting to 1.24 inches was received on the night of the fifteenth. It was of a torrential nature and considerable washing took place, especially on listed plats. Most crops were beginning to show some need of moisture when it was received. Temperatures have varied to a considerable extent during the past week. On Wednesday the temperature raised from 96 to 105 from eleven thirty to one o'clock. From about twelve thirty until six o'clock on the same day a hot southwest wind blew at the rate of about twenty-five miles an hour. It differed from the customary hot wind of this section in that it was a steady hot wind. The temperature did not fall below 100 until about sunset. Wheat fired quite badly and young sorghums were so nearly burned up that the leaves crumbled. Most of the plants have recovered somewhat at the present time. The soil which was crusted by the recent rain started to blow and it was necessary to get all forces into the fields with cultivators and harrows to prevent much damage from blowing. The wind had changed to the northeast by Thursday morning and temperatures have remained low since that time.

Crops in general are looking good on the station. The winter wheat is past the bloom stage now and unless something unforeseen happens should make a fair yield. The sorghums are making a satisfactory growth. It was necessary to replant all cowpeas on the dry land project because of a poor stand. The washing which took place the first of the week will no doubt necessitate the replanting of all listed plats.

Professors J. W. Zahnley, S. C. Salmon, and H.H. Laude, from the Kansas Station, were visitors this week.

Maximum temperature 105, minimum 55, precipitation 1.24 inches.

COLBY: (report of June 14)

Sorghums planted the week previously are all showing a stand with the exception of a few listed plats which are slightly slower in coming up. All surface planted sorghums, with the exception of the feteritas, are up to a stand; the fall-plowed and summer-tilled plats were the first to show a stand. A field of Early Sumac seeded for feed is showing a stand.

Corn is going to have quite thin stands on practically all fields. Some replanting has been done on varieties and on a few plats on the Station.

Winter wheat is going to need additional moisture before long or it will begin to suffer again. Practically all fields are fully headed out. The heads for the most part are rather short. Barley is heading out and is apparently going to be one of the lightest yields which we have received from this crop for a number of years.

Colby, contd.
This will be due to thin stands, lack of moisture, and lateness of planting. It is going to be questionable if some of the barley gets tall enough to bind. Winter wheat will all be tall enough to bind with the exception of MCA and MCB which are rather short and the wheat on these two plats may not bind. Oats are beginning to head and with the exception of MCA will be plenty tall enough to harvest. Spring wheat still looks good and is in the boot at the present time. Prelude spring wheat is, of course, fully headed.

Weeds are growing faster now than they have all spring.

All roads and alleys were cultivated during the week. Corn on the listed plats on the D.L.A. project was throwed out with the weeder today. Surface planted plats were harrowed yesterday. Corn is just now beginning to grow. The warm weather of the past few days has been good for the corn. Yesterday was by far the warmest day of the season to date, the temperature reaching 101 degrees. Several showers, almost cloudbursts, were reported north and east of the station for last night but here it scarcely sprinkled. Rain is going to be needed badly here before another week. Rye was plowed under for green manure the first of the week. A small border field of Sudan grass was seeded during the week. The Soybean nursery shows a good stand of all varieties.

Several additional orders for kafir and milo were filled during the week. This is one of the first years that we have had many calls for milo. Native pasture has a good growth at the present time. The areas around the buildings were mowed during the week.

COLBY:

Weather during the week remained dry and for the most part warm. Wednesday was one of the warmest and most disagreeable days which we have had for some time. The temperature reached a maximum of 106 degrees which was more noticeable due to an extremely warm wind. Apparently the crops did not suffer from the effects of the hot weather. Local showers continue to prevail in many localities. It is surprising how the wheat is holding on with the scant supply of moisture which there is in most of the fields. There is an alarming infestation of a species of the wheat straw worm. In examining straws for these pests it is a rare stalk which does not furnish one of the larva. A great many of the plants are beginning to turn white or die. Just how much of the early wheat will be far enough advance to escape serious damage remains to be seen.

Corn has just started to grow the past week. Corn was cultivated on the surface planted plats this week. The surface planting is very much farther advanced than the listing at this time.

A milo smut nursery was planted as was also the third date of planting sorghums during the week. It was necessary to replant some of the milo plats and the feterita plats. None of these will come now until it rains. The orchard was worked and hoed during the week. Considerable hoeing was done in cleaning up roads and alleys.

The sorghums which are up are growing nicely. On well prepared land there is a good stand of sorghums. On land not worked previous to seeding the stand of sorghums is rather spotted. A field of Early Sumac sorgo is up to a good stand. Sorghum varieties look fine. Soybean nursery looks good at the present time. Barley is practically all headed out. It will for the most part be tall enough to bind. Oats are headed and will need a rain before long. Winter wheat is filling good. Spring wheat is just heading nicely. In spite of the fact that we have had dry weather with occasional showers and traces of precipitation we have a trace of rust in the winter wheat.

Colby, contd.

Visitors during the week included Mr. H. H. Walkden of the Entomological Laboratory at Wichita, Kansas, Mr. W. F. von Trebra, a graduate of the Kansas State Agricultural College this year, arrived Monday to assist with the station work. Mr. C. G. Holden, a senior student at the same college, arrived Sunday to assist with work on the Station.

DALHART:

Extreme summer weather has prevailed during this week until Friday and Saturday, which reverted to spring. These two days were cool and windy. The temperature ranged up to 103 this week with several days of hot winds. This has been one of the windiest weeks of the year. This, coupled with the heat accompanying it, makes it a stem winder. No precipitation has been recorded this week.

Crops are making pretty good headway considering adverse conditions. This is the driest June to date since 1917. Some of the planting is being delayed in germinating on account of surface moisture. There is plenty of moisture below. In some places the stand is thin, or at first looked as if germination was poor on account of poor seed. This, however, is not the case as the seed is just showing a sprout above ground. It makes the plat look as if it were a replant. Most of the planting, however, is coming through to a good stand without delay.

The entire plat area of the station has been trimmed to plat sixe this week. In this plowing of plat lines the moisture is in exceptionally good condition. It is surprising how the moisture is holding out in this dry hot windy weather. Soil samples were taken at the regular time this week to a depth of six feet on plats A, B, C, and D of C. C. milo. Winter rye is beginning to ripen. It will make a good yield in spite of the dry finish it has had. All roadways were mowed during the week as well as the meadow in front of the buildings. This makes the place look considerably better.

Cotton is making a brave fight against dry weather and grasshoppers. Another application of poison was distributed this week in an effort to stop the grasshopper damage. The grapes and other vines, etc., which were being attacked by insects, were sprayed this week. There is a brown beetle which is in large numbers this year and is working on the grapes. It seems to be related to the white grub. This seems to be a banner year for the various species of insects.

TUCUMCARI:

The seven-day period ending June 19 broke all records for consecutive hot days, for during this period the maximum each day was from 101 to 105. Previous to this week the longest period with dail maximums of 100 or more was five days. The eighteenth and nineteenth, with temperatures of 105, were the hottest days since June 1918, while the mean temperature, 84, was the second highest of any week since records have been kept.

On the eighteen a hot west wind blew throughout the day, making this day extremely severe on crops, grass, and animals. Evaporation that date was .692 and the gauge showed a wind velocity of fifteen to twenty miles through the middle of the day when the thermometer was registering 100 to 105.

While there is an abundance of moisture below the first foot, surface soil is drying exceptionally fast. Soil moisture samples on MC milo show that the D plat, fallow, is drying much faster than the plats which are cropped. The young plants are so small that they are using comparatively little moisture, while on these plats the soil is in better condition to withstand evaporation. On the 18th the surface foot of the D plat showed less than six per cent moisture, while on all other plats more than eight per cent was present in the surface foot.

Tucumcari, contd.

Satisfactory stands have not appeared on much of the cotton block and on some north field rotation plats, but stands on the variety sorghum plats, increase, and center field rotation plats are in most cases excellent. No thinning has been done, as planting was late. Thinning of early date plats will be begun soon.

Precipitation in June to date is only .05 inch, while it is only 3.14 inches since January 1, compared with an average of 7.85 inches January 1 to June 30.

Maximum temperature 105, minimum 60; precipitation 0; wind velocity 5.8 miles; evaporation for the week 3.274 inches.

WOODWARD:

The maximum temperatures for the week have ranged from 86 to 111, and were 100 or above on four days. On seven of the past ten days the temperature has been 100 or over.

Wheat is ripening very rapidly and we have had one binder running since Thursday. The wheat on the plats will be probably ripe enough to harvest the first of next week. No headers have been seen at work as yet, but it has been reported that some will start in Monday.

Most of the early planted grain sorghum fields have been cultivated. All of the kafir, milo, and cowpeas on the plats have been replanted on account of poor stands.

The first peaches, Mayflower, and the first plums, Six Weeks, were picked during the week.

The south and west sides of the barn roof are being shingled and the barn is being painted. Some fencing is being done.

Maximum temperature 111, minimum 65, evaporation 3.033 inches, average wind velocity 5.9 miles.

BIG SPRING:

The weather during the past week has continued dry with exceedingly high temperatures prevailing most of the time. During five days of the past week the maximum temperature has been above 105 with 112 as the high point. This is the highest temperature ever recorded since the station has been established, and records in town show it to be the highest, during the past 20 years. This hot weather killed some cotton which had just emerged, but otherwise the crops have withstood the heat in pretty good shape.

The work during the past week has consisted mainly of thinning sorghums and cotton, and in cultivating. All of the plats in the rotations and part of the varieties were thinned; if weather permits, the coming week will wind up our thinning. The wheat crop was threshed on Friday, but very little grain was obtained; the yields ranged from one to ten bushels per acre.

Maximum temperature 112, minimum 62; precipitation 0.

ARDMORE:

A rainfall of .79 inch on the sixteenth and seventeenth was of some benefit to all crops, but at this time the effect is scarcely noticeable. the precipitation during the entire growing season has been so slight that nothing short of a very heavy rain will be of any material benefit.

All crops are suffering for moisture. Corn and cane are in better condition than small grain crops. Wheat has withstood the dry weather much better than oats, but neither crop has a chance to produce even a fair yield. Oats if fully headed and is only four to eight inches high.

Ardmore, contd.

Alfalfa will make no yield at all for the first time in the history of the station. All fields of this crop will be clipped the early part of next week and the clippings left on the ground for protection to the plants.

Native pastures are very dry and are furnishing very little feed. Unless there is considerable rain at an early date, it is probable that beef cattle will have to be provided with other pasture before the end of the grazing season.

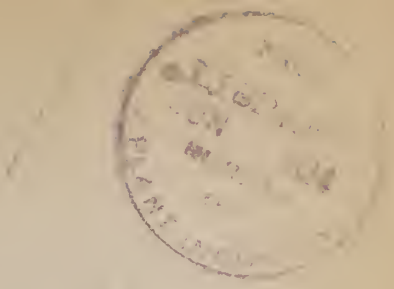
Maximum temperature for the week 92, minimum 39; precipitation .79 inch.

NOTES:

Field men are requested to kindly forward to the Washington office all unused transportation requests issued for the fiscal year 1924 immediately upon the termination of June 30, 1924.

In submitting vouchers for repair work of any character, each item for repairs should describe in detail the character of such work as the accounting officers of the Treasury now require that this be done.

96



WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 28 1924

REPORT FOR WEEK ENDING JUNE 28, 1924.
(Unless otherwise indicated.)

HAVRE:

The past week has been cool and rather cloudy with several small showers. Grains have grown rapidly. Some early wheat and oats in boot. Barley is mostly headed. Most of the rotation winter wheat had to be re-seeded. That remaining is very weedy and starting to head. Flax is making good growth but in some cases is weedy.

Corn has made slow growth and was cultivated for the first time this week. Alfalfa has been cut this week but the weather has been poor for curing.

Prof. Edmund Burke and F. L. Giesiker, of the Montana Experiment Station, were at the station on the 27th.
Maximum temperature 79, minimum 44; precipitation .39 inch.

JUDITH BASIN:

Cool, wet weather has prevailed during the greater portion of the week and very little field work has been permitted. Due to frequent light showers, a total of only three and one-half days field work has been possible during the past three weeks. Consequently, weeds have flourished uninterrupted and all field work is very backward.

All crops, except corn and potatoes, have made a very good growth and the prospects for both spring wheat and winter wheat are the best since 1915. Winter wheat is commencing to head and fall rye is over four feet tall and ready to turn under. Sweet clover has attained a height of about 24 inches but brome grass is quite backward. All trees have made an unusually rapid growth.

Work during the week has been devoted to the spraying of all poplars and willows in the shelter belt experiments, cultivating row crops and summer fallow, plowing for summer fallow and cleaning of alley ways.

Professor Clyde McKee visited the station during the week.
Maximum temperature 75, minimum 42; precipitation .60 inch.

HUNTLEY:

With the exception of rather cold nights the weather during the past week has been very favorable for crop growth. Corn, beans, sorghums and similar warm weather crops show a marked improvement in condition while small grains are beginning to show the need of rain. Alfalfa, sweet clover and brome grass are in bloom and ready for cutting. Where the stands are thick these crops are burning a little and the soil is badly cracked.

A good growth of rye, peas and sweet clover was plowed under in the green manure rotations during the week. Although the ground was dry in the rye and sweet clover plats it was possible to work it down in good shape after plowing. All row crops were cultivated for the second time on the 25th.

Huntley, continued:

Station visitors during the week included Prof. Clyde McKee, Agronomist at the Montana Experiment Station, J. C. Taylor, W. P. Stapleton and Chas. Ruzicka of the Extension Service. Mr. Ruzicka has just been appointed County Agent for Yellowstone County succeeeding W. P. Stapleton who has resigned to take employment with the Northern Pacific Railroad.
Maximum temperature 87, minimum 43; precipitation .17 inch.

SHERIDAN:

The greater part of the week has been comparatively cool. All crops have been making satisfactory growth.

All row crops and the alleys between the plats have been cultivated during the week. The corn also was thinned. Summer fallowing was completed, plat 'O' of the Methods of Fallow being plowed today. The sweet clover is ready to be turned under for green manure as soon as the work can be done. There is a heavy growth of this crop. The sweet clover for hay is now being cut.

All winter wheat is headed with the exception of the last two seedings. Early oats and wheat in the varieties are beginning to head.
Maximum temperature 82, minimum 46; precipitation 0.

MANDAN:

Agronomy.

The past week has not been entirely favorable for field work. Rain fell on four days out of the seven, and it is raining today. The total rainfall for the week was .55 inch, and the total for the month to date is 5.28 inches.

All crops, with the exception of corn, are making a good growth. Corn is from ten days to two weeks behind, and shows the need of warm weather.

All hay crops are ready to cut, but mowing has been delayed on account of wet weather.

Corn in the rotations was given the second cultivation during the week, and corn in the feed fields was given the first cultivation. All other row crops were also cultivated.

Fallow plats in the rotations were worked with the duck-foot cultivator. The heavy rain of over a week ago, packed the soil on all plats. The roadways were also worked with the duck-foot.
Maximum temperature 84, minimum 47; precipitation .55 inch.

Mandan, continued:

Cooperative Grazing Pasture.

Native vegetation is now in excellent condition for grazing in all pastures, and is as good as it has ever been at this time of year since the experiment started.

The cattle are all in good condition, and appear to have put on heavy gains during the month.

Horticulture.

All fruits and vegetables are much later than usual this year. Strawberries were being picked at this time last year, but they have just started to set now. Peas are not yet ripe in the acre garden.

A considerable amount of time has been spent on hoeing and weeding during the past week. Hedges have been trimmed, tomatoes tied to the stakes, cabbages and roses sprayed, young fruit trees from last year's budding staked and tied, garden stuff thinned, dead branches removed from all orchard trees, and several hundred softwood gooseberry cuttings have been made.

The recent rains have been of great benefit to fruit and garden crops, and a good yield of all small fruits and early maturing varieties of plums may be expected.

Arboriculture.

All tree seedlings were cultivated and hoed, and hoeing commenced in the specie testing blocks. All caragana hedges and seedlings were sprayed with arsenate of lead as a preventative against the blister beetles. Route maps and inspection sheets were completed for the summer inspection work. The inspectors plan on leaving July first.

ARDMORE:

The weather continues dry and hot with frequent high winds. There have been many bad storms in this section, but no rain of any consequence. A cyclone two weeks ago did much damage to a considerable section approximately 10 miles south of the station.

All falflfa fields on the station were clipped during the week. The crop was a complete failure.

The annual Farm Boys' and Girls' Camp will be held at the station from July 7 to July 11, inclusive. The Farmers' Picnic will be on Friday, July 11.

Maximum temperature 92, minimum 48; precipitation .04 inch.

ARCHER:

The weather has been dry and at times windy. Fogs have occurred four times during the week. To date the total precipitation for June is .86 inch. This is .75 inch below normal. However, most of the crops are doing well. The alfalfa and pastures are beginning to burn. Winter wheat is in head and looks well.

The work at the station has consisted of finishing the lining of plats, weeding, and cultivating corn and sunflowers. The greater part of the first cultivation will be completed today.

Maximum temperature 91, minimum 43; precipitation 0.

NORTH PLATTE:

The week has been dry throughout with high temperatures and high winds. Scattering areas in the small grain fields show the approach of moisture exhaustion. Winter wheat is beginning to color and if dry weather continues, harvest will not be long in arriving.

Over 100 tons of first cutting alfalfa on the station was put in the stack without rain on any of it.

Corn on the station is growing rapidly, but very backward for the time of year. In the western part of the state generally stands are very poor, the plants weak and small, and the fields badly over run by weeds.

The road between the station and North Platte is torn up in preparation for paving. The contracting company has a large force at work and it is hoped that the work will be completed by fall.

COLBY:

The weather still remains dry and only moderately warm. Winter wheat is apparently holding its own very well on most of the fields. The earlier wheat has about reached the stage where a rain would not help much. Wheat has held on remarkably well when we consider that we have had very little spring rainfall. The evaporation and hot winds have been rather in favor of the crop as the evaporation has never, except for a day or two, been very high while we have had hot winds but one day. Every stalk is infested with wheat straw worm; the greatest damage will come from this pest, evidently, in lowering the plumpness of the kernel. Winter wheat harvest will start on the station sometime during the coming week. Not all of the winter wheat will do to cut at the same time, however. Some of the D. L. A. plats would do to cut in a few days, while some may not do for two weeks. Neither barley nor oats will do to cut for some time. They will need a rain to make them good enough to cut as some of the plats are beginning to dry badly now. Surface planted corn is growing rapidly now. Corn listed is not so far advanced but on those plats that were not cloddy when planted the listed corn is even growing quite rapidly. Milo and kafir are growing noticeably now. Surface planted sorghums were cultivated during the week.

Colby, continued:

Work during the week consisted in the throwing out of the commercial field of corn, pulling soil samples, hoeing all roads and alleys, thinning corn varieties, throwing out isolated plats of corn, turning under peas for green manure and plowing plat MF-I winter wheat, disking field for June 30 date of planting sorghums, packing fallow fields and freshly plowed plats, and general note taking and rogueing of cereal crops.

There is a possibility that comparable stands may be a limiting factor in the date of planting sorghum test.

The early cherries are ripe at the present time. Apricots will be a total failure this year.

Lack of moisture to insure good germination has cut down the prospective acreage of sorghum crops. The same thing is true of corn. Much of the ground which was listed to corn and to sorghums will be summer tilled as a preparation for wheat this fall.

Visitors during the week included Dr. Ackert, of the Zoology Department of the Kansas State Agricultural College, Dr. Harlan, of the Barley Investigations office, U.S.D.A., Prof. S. C. Salmon and Prof. H. H. Laude of the Department of Agronomy, Kansas State Agricultural College.

WAYS:

The general weather conditions for the past week were very much the same as that reported for the previous week,- rather a wide range in temperature, 63 to 105 degrees, with one day of hot wind, and no rain of a measurable quantity.

Harvesting of winter wheat was commenced on both the Cereal and Dry Land project Thursday, and also on the commercial fields of barley with three binders. The continued dry weather has rushed the maturity of the grains. However, the winter wheat has developed wonderfully well. In spite of the damage caused by the fly and straw worms it is believed the commercial fields on the station will thresh an average of 20 bushels per acre for the most part of a good quality wheat. On the Dry Land project there are probably not more than eight plats that will thresh out less than 20 bushels and most of the fallow should thresh out 30 to 35 bushels.

Spring grains are generally not so good. Spring wheat is especially poor. Oats should produce about an average yield, and barley slightly below average. Barley has suffered some from chinch bugs and is now like the other spring grains, suffering from drought.

Row crops are making normal growth. None of these crops has yet drawn on the moisture supply in the soil heavy enough to exhaust it, whereas on most of the small grain plats the soil appears to be bone dry.

GARDEN CITY:

The past week has been hot and dry with considerable wind movement. Yesterday a hot wind blew from the southwest and the temperature reached 105. The wind did not last long enough to do much damage.

Crops are making a very satisfactory growth now. Wheat harvest will start in this part of the state next week. The winter wheat on the Dry Land project will be ready to cut by the middle of the coming week.

All listed plats of sorghum were replanted the first of the week. Replanting was necessary because of washing. Row crops that are up were cultivated, hoed and thinned to a uniform stand during the week.
Maximum temperature 105, minimum 63; precipitation .15 inch.

DALHART:

The weather has continued dry and hot. While not as hot as the preceding week, the temperature seemed as hot and hot winds were more in evidence. Every wind with the exception of one day was a hot one. The week was considerably more windy than usually occurs at this time of year. One evening the wind came up and blew so hard that considerable damage was done over the country. One tree at the station was broken off below the branches and many limbs were broken on others.

Crops are suffering in many places. Farmers are having considerable trouble due to the prevailing weather conditions. In many cases they are having trouble in getting the crop up due to the dry condition of the soil. In other cases they are having their crops cut off by blowing sand or covered up. The crops planted on the station are not showing any damage from this dry spell. There is still plenty of moisture within from three to four inches of the surface. The crops that were planted in good time, (and everything was except the June 15 date) is up and growing off good. It would seem that the spring grains and winter rye would be suffering extremely from the continued drought but it seems to be holding out well. The winter rye is now at the right stage to bind. The binder was started Wednesday and had to be stopped on account of the rye stems having so much moisture in them and being so heavy they would not elevate like they should. The binding will be resumed the first of the week. There has been no soil blowing on the station even during the heaviest winds. It is surprising how the fields are holding this spring.

The remaining fallows were plowed this week. One of them was getting quite dry due to the weed growth but the others were in good shape for plowing. The third date of planting and all the kafir on the D. L. A. rotations were thinned during the week. Thinning on varieties will be started the first of the week.

All visitors at the station express their opinion that this is the best looking place they have ever seen, in this country. Most of the people living in this section are proud of the station and are glad to bring visitors out to see it. There were in the neighborhood of 500 people here Friday evening. It was the largest crowd that has ever visited this place. The occasion was a Masonic Picnic. A number of out of town guests were here and a good time was had by all. Another picnic is being planned for August. It will be a general get-together with prominent speakers.

TUCUMCARI:

During the past week the hot wave has continued unabated, although portions of the county have had good rains. Twelve of the past sixteen days have shown maximum temperatures of 100 degrees or more, with a mean maximum for that period of 100. The mean minimum has been 65. Records show that no former June has approached this, while this heat wave has not been exceeded by any month since readings have been kept.

A shower of .41 inch on the night of the 25th relieved the situation somewhat, the moisture in some cases extending as far as surface drying had occurred. Row crops are growing well in most cases, but difficulty has been experienced in securing satisfactory stands of cotton. This crop had of necessity been planted rather shallow and in many cases the soil had dried below the seed before germination occurred. The rain of the 25th should insure fair stands where cotton to date has not emerged to good stand.

Wheat harvesting has begun on the plains and early seeded wheat will in most cases make fair to poor yields. Late winter wheat and the spring sown grains will make very low yields and much acreage will be abandoned. Ranges are drying rapidly.

Many portions of the county have had no rain this month, the rain of the 25th being very local in character. This rain, .41 inch at the station, measured 1.55 in Tucumcari, three miles away, while a mile east of the station no rain fell.

Cultivating, hoeing, and thinning have been done the past week. Stands on the early date plats were thin, but most other plats have satisfactory stands.

Maximum temperature 106, minimum 60; precipitation .47 inch.
Evaporation 3.118 inches. Wind velocity 6.3 miles per hour.

BIG SPRING:

The temperature during the past week has moderated considerably from that of the previous week. The maximum temperature dropped back to normal, although the rainfall has not been up where it should be. Thus far only .05 inch of rain has fallen this month; while the twenty-year average is 2.29 inches.

All crops on the old land seem to be making a good growth in spite of the dry weather, while much of the cotton on the sod land has begun to dry up.

The work during the past week has consisted mainly of cultivating and in finishing up of all thinning work. Some early wheeler peaches were picked; the trees are yielding fairly well, but the fruit is small and of poor quality.

Maximum temperature 101, minimum 67; precipitation 0.

LAWTON:

Beginning about June 8 the weather became hot and dry. From the 13th to the 18th, inclusive, the maximum temperature ranged from 101 to 106. This heated period was broken by cooler temperatures for a few days and a local rain of .42 inch on the 21st. From the 24th to the 28th high temperatures prevailed, reaching a maximum of 103. Hot winds swept the country on several dates leaving the row crops badly in need of moisture. Corn tasseled under high temperatures and the prospects for grain production are meager.

Threshing has been in full progress for a week throughout the county. Southwestern Oklahoma will not often equal or exceed this years' acre yields of small grains.

The grasshopper damage has become a serious problem in the last ten days. Many fields of cotton have been completely destroyed. The second crop of alfalfa was very heavily damaged and many fields of corn are badly injured. Fields of feed crops have also suffered damage to some extent, depending largely on the location.

Poisoned bran is being used very extensively over the county with results that are quite satisfactory. In many instances the control measures are begun too late. The use of poisoned bran has been employed very extensively on the station and a hopperdozer has been in use all week on the alfalfa fields. The hopperdozer has attracted very favorable attention among the farmers and a good many are being made and used. Excellent results have so far been obtained on the station. Heavily infested pastures, one on each side of the station, however, presents a rather discouraging aspect to the work. So far, the damage to row crops on the station has been held to a minimum.

Threshing has progressed slowly, being daily interrupted by the necessity of fighting grasshoppers.

The total precipitation for June to date amounts to 1.69 inches.

WOODWARD: Week ending June 14, 1924.

After having had abnormally cool weather for some time it suddenly turned hot with maximum temperatures ranging from 103 to 108 for three days in succession.

The kafir, milo, cowpeas, cotton, beans and Sudan on the D. L. A. plats were planted the first of the week.

Other work on the station has consisted principally of haying, spraying the vineyard, cultivating orchard, vineyard, and windbreaks, and hoeing tree rows.

The hot, dry weather is ripening wheat and rye very fast, and it is a question whether there is enough moisture to ripen it properly.
Maximum temperature 108, minimum 03; precipitation .05 inch.
Evaporation 1.992 inches. Average wind velocity 6.2 miles per hour.

WOODWARD:

The weather has remained hot and dry. Harvesting of wheat and rye on the station has been completed; harvesting over the county is progressing rapidly.

We are experiencing a good deal of trouble with grasshoppers. Sudan for pasture is being replanted, on account of grasshopper damage. Up to date about 500 lbs. of poisoned bran mash has been used in fighting them. It is planned to put out another 300 lbs. tonight.

Kafir, milo and sumac which were replanted on the D. L. A. plats have, in most cases, emerged to a good stand. The second date-of-planting of cotton has been thinned; the first date was spring-toothed out as no stand was obtained. The third date will be ready to thin within a few days. Some alfalfa has been uct during the week, and peaches, plums, berries and cherries were picked.

Maximum temperature 105, minimum 66. Evaporation 3.233 inches.
Average wind velocity 11.5 miles per hour.

NOTE:

Attention is called to the following memorandum received from the Office of Chief of Bureau:

"In a number of cases the submittal of reimbursement vouchers has been very much delayed, resulting in uncertainty in the financial standing of various projects and generally tending to interrupt effective administration. Your attention is called to the fiscal regulations which assume the submittal of monthly accounts covering reimbursements, with the exception of temporary special disbursing agents who submit their accounts quarterly. It is important that accounts be submitted monthly and in all cases within 30 days after the close of a quarter. If for any reason this is not practicable, a satisfactory explanation should be made. Your hearty co-operation is requested."